

## Description

### Baby Support Wrap System

#### Field of the Invention

The present invention relates generally to childcare products, and, more particularly, to an improved system for providing support for a baby while it is being held or carried.

#### Background of the Invention

Babies, and particularly infants, can be difficult to support while being held and carried. In particular, due to the fragile nature of babies, there is concern on the part of the person holding the baby as to whether proper support for the baby's head and back is being provided. Inadequate support can lead to discomfort for the baby. Also if the baby is jostled while being held, the lack of support can result in injury to the baby. Because of these concerns, a person who is not used to holding a baby may be apprehensive and uncomfortable while doing so, and will likely not enjoy the experience.

People attempt to provide support for babies they are holding by positioning the baby in their arms so that the baby's back is support by the person's forearm, and the baby's head is cradled between the person's forearm and biceps. While this does provide some support it is not optimal since a person's arm does not conform to the baby's body. In this circumstance, if the baby moves or the person changes arm position, the location and quality of support also change. Furthermore, there is no such support provided while the baby is handed from one person to another. Observation of parents, particularly new parents, reveals the concern and apprehension they have when transferring an infant to each other or to someone else. Moreover, the person receiving the baby may not be accustomed to holding young children and is often uncomfortable in doing so since they are not sure if they are providing adequate support. While support for a baby may be provided in a baby seat, these devices are not always useful for carrying the baby. Also,

although baby carriers may provide support for a baby, they do not allow for the close intimate contact that holding a baby in one's arms provides.

Furthermore, if a parent is carrying a baby and must release the baby for some reason, this action may be disconcerting for the parent and uncomfortable for the baby. Typically, a baby may be placed for a brief period on a flat surface. When the baby is laid on a flat surface, there is no support provided under portions of the baby's head or back, which can lead to discomfort for the baby. This discomfort is troubling to the parent. Moreover, placing the baby on a flat, hard, surface exposes the baby to bumps and bruises when being laid down, or when wiggling about without significant padding between the baby and the surface.

Additionally, the American Academy of Pediatrics recommends that all healthy infants be placed for sleep on their backs in order to reduce the chance of sudden infant death syndrome, (See Pediatrics, Vol. 89, No. 6, 1120, June 1992; See also Pediatrics, Vol. 93, No. 5, 820, May 1994.)

Therefore a baby support system is needed which will provide adequate support to protect the baby and make it comfortable while it is being held and carried by a person. The support should also allow intimate contact between the baby and the person holding it. Furthermore, such a support system should provide support and comfort for a baby while it is resting or being laid upon a hard surface, or maintaining a supine position while sleeping.

### Disclosure of the Invention

The present invention is directed to providing improved support for a baby, and particularly the baby's head, neck and upper back, while it is being held and carried. The invention also provides support and comfort if the baby must be momentarily laid down on a hard surface. Additionally, promotion of supine positions during sleep is provided.

In one aspect, the present invention provides a baby support comprising a wrap member sized to substantially encapsulate the baby. The wrap member comprises a means for receiving a support pad and positioning the support pad so as to support at least the head, neck and upper back of the baby. The wrap member further comprises a security means for securing the baby to the wrap member. The security means comprises at least one security panel attached to the wrap member which releasably secures the baby in a preselected position on the wrap member.

The baby support system includes two support features for supporting a baby. The first support feature wraps about and at least partially encapsulates the baby and thereby secures the baby adjacent to a second support feature. The second support feature provides additional support for the baby's head and back by conforming to portions of the baby's body. The first support feature, after being wrapped around the baby, may be temporarily secured in place.

The baby support system may be adapted for babies of various sizes. This allows the support system to be used continuously as the baby grows. The support system is adapted for use with babies of different sizes by changing the size of the support pad, which is positioned adjacent to the baby.

**Brief Description of the Drawings**

Figure 1 is a top plan view of one embodiment of the baby support system;

Figure 2 is a top plan view of one embodiment of the baby support system with a baby positioned thereon;

Figure 3 is a perspective view of a baby lying on a support pad used in one embodiment of the baby support system of the invention;

Figure 4 is a perspective view of a baby secured in one embodiment of the baby support system of the invention;

Figure 5 is a front perspective view of one embodiment of the baby support system;

Figure 6 is a rear perspective view of one embodiment of the baby support system;

Figure 7 is a perspective view of one embodiment of the baby support system, illustrating components thereof in their disassembled state;

Figure 8 is an exploded perspective view of a cover for the support pad; and

Figure 9 is a perspective view of another embodiment of the baby support system, illustrating components thereof in their disassembled state.

### **Detailed Description of the Invention**

The present invention is directed to providing improved support for a baby, and particularly the baby's head, neck and upper back, while it is being held and carried. The invention also provides support and comfort if the baby must be momentarily laid down on a hard surface. Additionally, promotion of supine positions during sleep is provided.

The present invention provides a baby support comprising a wrap member sized to substantially encapsulate the baby. The wrap member comprises a means for receiving a support pad and positioning the support pad so as to support at least the head, neck and upper back of the baby. The wrap member further comprises a security means for securing the baby to the wrap member. The security means comprises at least one security panel attached to the wrap member which releasably secures the baby in a preselected position on the wrap member.

Embodiments of the invention will now be described with reference to accompanying Figures, wherein like numerals refer to like elements throughout. The terminology used in the description presented herein is intended to be interpreted in its broadest reasonable manner, even though it is being utilized in conjunction with a detailed description of certain specific embodiments of the invention.

It will be appreciated that a baby support system, which incorporates the spirit of the invention, may embody many alternative configurations, and may include many optional components including components currently used in other applications. A specific example of one embodiment of the invention is described in conjunction with Figure 1.

A baby support system, as shown in Figure 1, comprises a wrap member for encapsulating the baby 100, and includes a means for receiving a support pad 102. The wrap member may conveniently be made from a piece of fabric, or other flexible member. As used herein, the term 'fabric' is taken in its functional sense to mean a material that is flexible and capable of being shaped around an object without losing its flexibility and resilience. The term does not imply any particular composition or means of manufacture, such as a textile. Similarly, the term 'support pad' is also taken in a functional sense to mean a material that is flexible and capable of being shaped around an

object, though to a lesser extent than a fabric. The term 'support pad' also does not imply any particular composition or means of manufacture.

In one embodiment, the support pad 102 is removably positioned adjacent to the piece of fabric. In another embodiment the support pad 102 need not be removable. During use, the support pad 102 will be positioned under the baby in such a way as to support the baby's head and back. While the piece of fabric 100 in this embodiment is rectangular, other shapes can be used such as, for example, triangular, circular, oval, or an irregular shape. Although the term fabric is used, the invention contemplates any type of material, which can provide for securing the support pad 102 adjacent to a baby. Additionally, the fabric may be made of waterproof or water resistant material. Furthermore, although the support pad 102 is illustrated as defining a generally oval shape, other shapes can be used such as, for example, rectangular, circular, or an irregular shape. Moreover, it is contemplated that the support pad may be fabricated from many different materials, composed of multiple types of materials, or be in multiple pieces and still remain within the spirit of the present invention. Additionally, although this embodiment shows the support pad 102 on the side of the fabric 100 which comes into contact with the baby, it will be appreciated that the support pad 102 can also be positioned on the opposite side of the fabric.

As an additional feature of the present invention, a supplemental security feature is provided, an embodiment of which is depicted in Figure 1 as a pair of panels 108, 110 each secured at one end to the support fabric 100 in a region proximate to the location of the support pad 102. These panels 108, 110 will be sized so as to be able to overlay the baby when the baby is located on the support pad. However, it will readily be understood that the security feature can consist of a single panel which can be releasably fastened about the baby, or can comprise a plurality of panels to provide a security feature as well.

The panels 108, 110 will desirably also include a means for retaining the panels in position around the baby once the baby is positioned on the support pad 102. One embodiment of such a retaining means comprises at least one retaining region 112, 114 positioned on the appropriate side of each panel 108, 110 so that the retaining regions 112, 114 can be joined as the panels are laid across the baby. For example, retaining

regions 112, 114 can comprise a complementary pair of patches consisting of one patch of small hooks that adheres to a corresponding patch of small loops, and wherein at least one patch 112 is connected to panel 108 and at least one complementary patch 114 is connected to the remaining panel 110, and whereby the retaining panels are joined by engaging at least one patch 112 on panel 108 to at least one complementary patch 114 on panel 110. One readily available material for providing such retaining means is the complementary materials which comprise Velcro®, a material well known in the art.

Alternative embodiments of such retaining means are also well known in the art, and include complementary pairs of zipper strips, wherein at least one zipper strip is connected to panel 108 and at least one complementary zipper strip is connected to panel 110, or complementary pairs of snaps, wherein at least one complementary part of a snap pair is connected to panel 108 and at least one opposing complementary part of a snap pair is connected to panel 110.

Figure 2 illustrates a baby 104 positioned in a desired location on the baby support system. This illustration shows that the baby 104 is positioned on top of the support pad 102. The portion of the support pad 102 located near the baby's shoulders is wider than the width of the baby's shoulders as indicated by  $\alpha$ . Additionally the support pad 102 is longer than the baby's head and trunk as indicated by  $\mu$ . When the baby 104 is laid on the support pad 102 the baby's weight causes the support pad 102 to conform to the adjacent contour of the baby's body, thereby providing support for those adjacent portions of the baby 104. In particular, the support pad 102 provides support under the baby's head and back.

Once the baby 104 is in the desired position on support pad 102, panels 108, 110 may be overlaid on the baby 104 and secured about the baby using the retaining means 112, 114. In this manner, the baby 104 can be "swaddled" against support pad 102 thus increasing the baby's sense of comfort and security, as well as providing retention of the baby 104 in the present support system.

As an additional means to retain the baby 104 on the support pad 102, the fabric 100 is wrapped about the baby 104. In this embodiment the support pad 102 is sized in relation to the baby 104 so that the support pad 102, being wider than the width of the

baby, will extend upwardly along the sides of the baby 104 when the fabric 100 is wrapped about the baby 104. With the support pad 102 extending along the sides of the baby 104, the baby is more easily retained in its relative position with respect to the support pad 102.

Also shown in Figure 2 is a first attachment member 103, which may be used for positively maintaining the fabric 100 in its wrapped position. The first attachment member 103 can be located, in one embodiment, on the edge of the fabric 100. The first attachment member 103 may engage with a second attachment member not shown, which is located on the opposite side of the fabric so as to removably attach different portions of the fabric 100 and thus hold the fabric in a desired configuration. For example, when the fabric 100 is wrapped about the baby 104 the first attachment member 103 may engage the second attachment member, not shown, securing the fabric 100 in a wrapped position. Since the support pad 102 extends upwardly along the side of the baby 104, if the fabric 100 is secured around the baby 104 then the baby 104 will remain in approximately the same relative position in the support system while being held, carried, transferred between two people, or laid on a surface.

Figure 3 shows a perspective view of a baby 104 on the support pad 102 of the baby support system. When the baby 104 is laid on the support pad 102, the support pad 102 at least partially conforms to the contour of the baby's body due to the weight of the baby 104. In particular the support pad 102 provides support under the baby's head 105, and the baby's back 106. This supporting function alleviates the concern of the person holding the baby 104 as to whether they are providing adequate support for the baby 104. The baby 104 can be held or carried with the support system providing adequate support at all times and the person holding the baby 104 can feel more confident and relaxed about whether they are holding the baby 104 correctly.

Furthermore, if the support pad 102 is made from a resilient, memory-foam material, such as Tempur-Pedic foam, manufactured by Tempur-Pedic Inc., it will return to its original shape when the baby 104 is removed. This resilient feature of the support pad will allow the pad to conform to the contour of the baby's body each time the baby 104 is placed on the support pad 102. Thus the support system will be able to provide

support even though the baby 104 is placed on the support pad 102 in a slightly different location. Additionally, a resilient pad allows for continued use as the baby 104 grows larger, until the pad is no longer sufficient in size and can be replaced with another larger pad.

Figure 4 illustrates the baby support system as it appears when wrapped about the baby 104. When the fabric 100 is wrapped about the baby 104, it applies force to the support pad 102, which causes the support pad 102 to wrap around at least a portion of the sides of the baby's body and head. As the support pad 102 wraps around the sides of the body of the baby 104, the pad provides support to keep the baby 104 on the pad. Therefore, as the fabric 100 is wrapped about the baby 104 the support pad 102 remains in proximity to the body of the baby 104. The support pad 102 may be made of a resilient, memory-foam, material so that it will recover its original form when the support system is unwrapped and the baby 104 is removed.

In one embodiment the fabric is wrapped about a baby with no securing means. In another embodiment, while the fabric 100 is wrapped around a baby the first attachment member, 103 in Figure 2, may be used for securing the fabric 100 in place by mating with a second attachment member, not shown, located on the opposite side of the fabric. The first attachment member 103 and the second attachment member, when mated, maintain the fabric 100 in a desired position about the baby 104. With the fabric 100 wrapped about the baby 104 and maintained in a desired position, the support pad 102 extends at least partially up the sides of the baby 104 providing support to the baby 104 both when the baby 104 is being held and when the baby 104 is placed on a surface. Additionally, securing the baby in the support system ensures that the baby maintains a supine position during sleep. This is advantageous, given the recommendation of the American Academy of Pediatrics "that healthy infants, when being put down for sleep, be positioned on their side or back. (See, Positioning and SIDES, in PEDIATRICS, Vol. 89, No. 6, 1120, June 1992. The Academy has subsequently reaffirmed its recommendation stating "[W]e strongly endorse the practice of placing healthy infants on their sides or backs when putting them down to sleep." (See, Infant Sleep Position and Sudden Infant Death Syndrome (SIDS) in the United States: Joint Commentary from the American

Academy of Pediatrics and Selected Agencies of the Federal Government, PEDIATRICS, Vol. 93, No. 5, 820, May 1994).

Figure 5 is a front perspective view of one embodiment of the invention. In this embodiment a pouch 120 is formed by securing a selected piece of material 122, about its periphery to the fabric 100. In one embodiment the selected material 122 is connected to the fabric 100 to form the pouch 120 by sewing the periphery of the selected piece of material 122 to the fabric 100. It is anticipated that in other embodiments the selected piece of material 122 may be connected to the fabric 100 by other methods such as, for example, Velcro® patches, snaps or zippers. The pouch 120 defines an open space or pocket between the selected piece of material 122 and the adjacent face of the fabric 100, within the periphery of the selected piece of material 122. The support pad 102 is placed within the pocket in the pouch 120 and is thus maintained in position on the fabric 100.

In the embodiment of Figure 5 the surface of the pouch 120 protrudes from the front side of fabric 100 which comes into contact with the baby. With the pouch 120 formed on this side of the fabric 100, as the fabric 100 is wrapped about the baby the fabric 100 provides a force against the support pad 102, causing the support pad 102 to wrap around at least a portion of the sides of the baby and to be maintained in proximity thereto.

Figure 6 is a rear perspective view of the embodiment of the baby support system of Figure 5. As was noted above, the pocket of the pouch formed between the selected piece of material 122 and the fabric 100 receives the support pad 102 and maintains it in a desirable position on the fabric 100. An opening 130, such as a slit formed in the fabric 100 adjacent the selected piece of material 122 provides access to the pocket of the pouch 120. This opening 130 is configured to allow the support pad 102 to pass therethrough and thus to be inserted and removed from the pocket of the pouch 120.

In one embodiment of flap of fabric 134 is provided to cover the opening 130. The flap 134 is comprised of a first edge 135, and a second edge 136. The flap 134 is connected to the fabric 100 along the first edge 135 by conventional means such as stitching. In other embodiments the flap 134 may be connected to the fabric 100 by other means such as, for example, Velcro® patches, snaps or zippers. The second edge 136 of

the flap 134 extends over the opening 130 in the fabric. The flap 134 may optionally be secured in position over the opening 130 by use of a Velcro® patch, not shown, located on the side of the flap 134 facing the fabric 100 and mating with a Velcro® patch 137 on the fabric 100. Other methods of securing the flap 134 over the opening 130 may be used such as, for example, snaps and zippers.

In the embodiment shown in Figure 6, the support pad 102 can be easily removed from the pouch, not shown, through the opening 130 in the fabric 100. Removal of the support pad 102 from the fabric 100 allows each to be cleaned independently in a manner appropriate for each. Also shown in the embodiment of Figure 6 is an attachment member 138 which may be used to secure the fabric 100 when the fabric 100 is wrapped about the baby. The attachment member 138 engages with a first attachment member 103 located on the opposite side of the fabric 100, as was discussed previously in reference to Figure 2. As the fabric 100 is wrapped about the baby the two attachment members 103 and 138 are aligned with each other and are mated. It is contemplated that the attachment members may comprise various types of attaching devices such as, for example, Velcro® patches, snaps and zippers.

Figure 7 illustrates another embodiment of the invention. In this embodiment the support pad 102 is secured within a separate cover 140. Figure 8 shows an embodiment of the cover 140, which comprises a first piece of fabric 300 and a second piece of fabric 302. The first piece of fabric 300 is secured to the second piece of fabric 302 joining them about their periphery 304. In one embodiment the first piece of fabric 300 and the second piece of fabric 302 may be made of waterproof or water resistant material. The two pieces of fabric are joined so as to make a receptacle, which receives the support pad 102. In this embodiment, the two pieces of fabric, which make up the cover 140 are joined by sewing. However it is contemplated that other means for joining can be used such as; for example, Velcro® patches, zippers, a combination of stitching and zippers a combination of stitching and Velcro® patches or a combination of Velcro® and zippers. It is contemplated that the cover may be formed using a single piece of fabric which is folded and then secured about the periphery. In one embodiment the support pad 102 may be permanently fixed inside the cover 140. In other embodiments, the support pad

may be removably inserted into the cover 140 through an opening 306 in the cover 140. The opening 306 may be closed by a cover-securing member 308. It is contemplated that the cover opening 306 may be secured through various securing members 308 such as, for example a zipper or Velcro® patches.

Located on one side of the cover 140 are attachment members 445. The attachment members 445 are used to secure the cover to the piece of fabric 100. In the embodiment shown in Figure 7, the attachment members 445 located on the cover 140 engage mating attachment members 446 located on the fabric 100. The attachment members maintain the cover 140 in a desired position in relation to the fabric 100. An advantageous feature of this embodiment is that it allows the cover 140 containing the support pad 102 to be easily removed from the fabric 100. Removal of the cover 140 from the fabric 100, and the support pad 102 from the cover 140 allows each to be cleaned independently in a manner appropriate for each. Additionally, the attachment members 445 allow use of different size support pad 102 and cover 140 on the same fabric 100. This allows the size of the support pad 102 and cover 140 to change, allowing for changes in size as the baby grows, or for use with babies of various sizes. To allow different size support pad 102 to be attached to the fabric 100, the cover attachment members 445 on the different sized covers engage the attachment members 446 on the fabric 100. One skilled in the art would appreciate that there are many available methods and devices that can be used for attachment of the cover 140 to the fabric 100 such as, for example, Velcro® patches, or snaps, that would be within the spirit of the described invention.

In another embodiment the support pad 102 and cover 140 are not attached to the fabric 100, but rather placed on the fabric 100 with no attachment means. In this embodiment the texture of the surface of the support pad cover 140 adjacent to the fabric 100 is configured to minimize sliding of the support pad 102 on the fabric 100 surfaces. Accordingly, the interaction between the surface of the support pad cover 140 and the fabric 100 is such that the support pad 102 maintains a desired position on the fabric 100. In another embodiment the support pad 102 without a cover may be placed on the fabric 100 with no attachment means. In this embodiment the texture of the surface of the

support pad 102 adjacent to the fabric 100 is configured to minimize sliding of the support pad 102 on the fabric 100 surface. The interaction between the surface of the support pad 102 and the fabric 100 is such that that support pad 102 maintains a desired position on the fabric 100.

Figure 9 illustrates still another embodiment of the invention. In this embodiment the support pad 102 is secured within in a separate cover 140. This embodiment includes a cover attachment member comprising a zipper 447 located on the periphery of the cover 140. The zipper 447 engages a mating zipper 448 located on the fabric 100. The zipper 447 allows attachment or removal of the cover 140 from the fabric 100. As described in relation to Figure 8, the support pad 102 may be removable from the cover 140. Separating the baby support system into its various components allows each to be cleaned independently in a manner appropriate for each.

The foregoing description details certain embodiments of the invention and describes the best mode contemplated. It will be appreciated, however, that no matter how detailed the foregoing appears, the invention can be practiced in many ways. As is also stated above, it should be noted that the use of particular terminology when describing certain features or aspects of the present invention should not be taken to imply that the terminology is being re-defined herein to be restricted to including any specific characteristics of the features or aspects of the invention with which that terminology is associated. The scope of the present invention should, therefore, be construed in accordance with the Claims and any equivalents thereof.